

**REMARKS**

Claims 1-55, 60-62 and 64-76 are pending in the present application. Claims 56-59 and 63 were previously canceled. Claims 6-19, 22-40, 44-55 and 69-75 have been withdrawn. Of elected claims 1-5, 20, 21, 41-43, 60-62, 64-68 and 76, claims 1, 61 and 76 are independent. Claim 62 has been amended. These amendments are being made without conceding the propriety of the Examiner's rejection, but merely to timely advance prosecution of the present application. Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks.

**Restriction/Election**

The Examiner initially required an election in the present application in the Office Action dated May 29, 2009, however, did not provided has not provided a specific allocation of species and sub-species. For the purpose of examination of the present application, the Applicants elected Species suggested by the Examiner, as follows: "LCD using PWM of a single light source backlight to generate first and second intensity levels" and asserted that that claims 1-5, 8, 15-19, 20-24, 26, 28, 29, 37, 38, 40-43, 46, 48, 49, 60-62, 64-68, 71 and 76 are directed to the elected species and at least claims 1, 61 and 76 are generic in a response filed on July 29, 2009.

The Examiner disagreed with the Applicants' claim grouping and contacted Applicants' Representative on September 16, 2009 to present an alternative claim grouping that the Examiner believes reads on the elected species "LCD using PWM of a single light source backlight to generate first and second intensity levels". In a telephonic interview, the Examiner suggested that claims 1-5, 20, 21, 41-43, 60-62, 64-68 and 76 are directed to the species "LCD using PWM of a single light source backlight to generate first and second intensity levels". Applicants agreed to further restrict the claims for prosecution and thus 1-5, 20, 21, 41-43, 60-62, 64-68 and 76 were elected orally, without traverse, on September 16, 2009.

Requirement for Information

The Examiner had also requested information under 37 C.F.R. § 1.105, Requirement for Information on May 29, 2009. Applicants thank the Examiner for acknowledging that the submittal on July 29, 2009 has satisfied the requirement under 37 C.F.R. § 1.105.

Claim Objections

Claim 62 is objected to for a typographical error. In light of the amendment to claim 62 to correct this error, it is respectfully requested that this objection be withdrawn.

Legal Standard for Anticipation and Obviousness Rejections

According to M.P.E.P. §2131, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. Of California, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ...claims." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913 (Fed. Cir. 1989).

Similar to anticipation rejections, in order to establish a *prima facie* case of obviousness, the prior art references must teach or suggest all the claim limitations. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). "Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." In Re Kahn, 441 F.3d 977, 988 (CA Fed. 2006).

Claim Rejections under 35 U.S.C. § 102

Claims 1, 2, 5, 20, 41, 42, 61, 62, 64, 67 and 76 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Miyachi et al. ("Miyachi", U.S. 2002/0008694). This rejection is respectfully traversed.

Independent claims 1, 61 and 76 recite, *inter alia*, "emitting a first light emission component and a second light emission component, the first light emission component

accounting for D% of a vertical cycle of the video signal in terms of duration and S% of a light emission intensity of a pixel over the vertical cycle, the second light emission component accounting for (100-D)% of the vertical cycle in terms of duration and (100-S)% of the light emission intensity”.

The Examiner generally refers to Figure 46 of Miyachi to teach the above-mentioned claim features. Specifically the Examiner asserts that “H1” of Figure 46 is equivalent to the first light emission component of the claimed invention and that “P” of Figure 46 is equivalent to the second light emission component of the claimed invention (*See Page 3 of the Office Action*).

However, it is clear that the Examiner simply is taking words and figures out of context since Figure 46 clearly does not disclose the claimed invention. According to Miyachi, Figure 46 represents an inverter control circuit that incorporates four equal small pulses P in an OFF period of the inverter input signal, which is the OFF period of the cold cathode tube in Figure 46 (*See [0388]*). Each small pulse P has a time width of H2 which is smaller than a time width H1 of an ON period, which is the ON period of the cold cathode tube (*See [0388]*).

There is simply no discussion in Miyachi of “emitting a first light emission component and a second light emission component, the first light emission component accounting for D% of a vertical cycle of the video signal in terms of duration and S% of a light emission intensity of a pixel over the vertical cycle, the second light emission component accounting for (100-D)% of the vertical cycle in terms of duration and (100-S)% of the light emission intensity”. It is unclear where the Examiner is finding the corresponding features in Miyachi.

Furthermore, independent claim 1 recites, *inter alia*, “wherein an amount of trailing and an amount of flickering are reduced relative to the amounts of trailing and flickering for S = 100 by controlling the first light emission component and the second light emission component so that D and S meet either a set of conditions A:  $62 \leq S < 100$ ,  $0 < D < 100$ , and  $D < S$ , or a set of conditions B:  $48 < S < 62$ , and  $D \leq (S-48)/0.23$ ”. Independent claim 76 recites, *inter alia*, “wherein an amount of trailing and an amount of flickering for S = 100 are reduced by controlling the first light emission component and the second light emission component so that D and S meet either a set of conditions A:  $62 \leq S < 100$ ,  $0 < D < 100$ , and  $D < S$ , or a set of conditions B:  $48 < S < 62$ , and  $D \leq (S-48)/0.23$ ”.

Again the Examiner refers to Figure 46 to disclose these features (*See Office Action, Pages 4-5*). In the Examiner's rejection, the Examiner notes "Fig. 46, which shows D roughly = 50 and S roughly = 69" (*See Office Action, Page 4*). However in the figure, there is no such item that corresponds to S and D of the claimed feature and moreover, the conditions are not discussed in the figure or in the corresponding text describing Figure 46 (*See [0386]-[0392]*). The text corresponding to the description of Figure 46 simply does not control the light emission components to meet any set of conditions, much less the conditions as claimed (*See [0386]-[0392]*). Also, Miyachi simply does not discuss reducing an amount of trailing and an amount of flickering in the reference. It is unclear where the Examiner is finding the corresponding features in Miyachi.

Independent claim 61 recites, *inter alia*, "wherein: D and S meet either a set of conditions A:  $62 \leq S < 100$ ,  $0 < D < 100$ , and  $D < S$ ; or a set of conditions B:  $48 < S < 62$ , and  $D \leq (S-48)/0.23$ ; an amount of trailing and an amount of flickering for  $S = 100$  are simultaneously reduced by controlling the first light emission component and the second light emission component so that  $D/2 \leq P \leq (100-D/2)$ , and  $0 < D < 100$ , where P is a ratio in percentages of a duration to the vertical cycle, the duration beginning at a start of the vertical cycle and ending at a midpoint of a light emission period associated with the first light emission component".

The Examiner once again relies on Miyachi to disclose the above-mentioned claim features. The Examiner notes in the rejection that "Fig. 46, which shows D roughly = 50 and P roughly = 75 and the "H1" or D period falling within a frame time" (*See Office Action, Page 7*).

However, as discussed above, Miyachi simply does not discuss the above-mentioned claim features. Miyachi does not discuss reducing an amount of trailing and an amount of flickering by controlling light emission components such that the claimed conditions are met. Moreover, Miyachi does not even discuss "D and S meet either a set of conditions A:  $62 \leq S < 100$ ,  $0 < D < 100$ , and  $D < S$ ; or a set of conditions B:  $48 < S < 62$ , and  $D \leq (S-48)/0.23$ ", " $D/2 \leq P \leq (100-D/2)$ , and  $0 < D < 100$ , where P is a ratio in percentages of a duration to the vertical cycle, the duration beginning at a start of the vertical cycle and ending at a midpoint of a light emission period associated with the first light emission component".

emission period associated with the first light emission component". It is unclear where the Examiner is finding the corresponding features in Miyachi.

For at least the reasons stated above, independent claims 1, 61 and 76 are patentably distinct from Miyachi. Claims 2, 5, 20, 41, 42, 62, 64 and 67 are at least allowable by virtue of their dependency on the corresponding allowable independent claim.

Accordingly, it is respectfully requested to withdraw this anticipation rejection of claims 1, 2, 5, 20, 41, 42, 61, 62, 64, 67 and 76 based on Miyachi.

Claim Rejections under 35 U.S.C. § 103 – Miyachi

Claims 3, 4, 21, 43, 60, 65 and 66 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Miyachi et al. ("Miyachi", U.S. 2002/0008694). This rejection is respectfully traversed. As discussed above, independent claims 1, 61 and 76 are patentably distinct from Miyachi. Claims 3, 4, 21, 43, 60, 65 and 66 are at least allowable by virtue of their dependency on the corresponding allowable independent claim.

Accordingly, it is respectfully requested to withdraw this obviousness rejection of claims 3, 4, 21, 43, 60, 65 and 66 based on Miyachi.

Claim Rejections Under 35 U.S.C. § 103 – Miyachi, Funamoto

Claim 68 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Miyachi et al. ("Miyachi", U.S. 2002/0008694 in view of Funamoto et al. ("Funamoto", U.S. 6,890,225). This rejection is respectfully traversed. Funamoto does not remedy the noted deficiencies of Miyachi and thus cannot correct the defects of the Examiners rejection based solely on Miyachi.

Accordingly, it is respectfully requested to withdraw this obviousness rejection of claim 68 based on Miyachi and Funamoto.

**CONCLUSION**

In view of the above amendment and remarks, Applicants believe the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application; the Examiner is respectfully requested to contact Charu K. Mehta, Reg. No. 62,913 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

Dated: 12/22/2009

Respectfully submitted,

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